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EXAMINER	
HAJNIK, DANIEL F	

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/693,822	BLANCO ET AL.	
	Examiner	Art Unit	
	Daniel F. Hajnik	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *23 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/28/2006 has been entered.

Claim Objections

2. Claim 5 is objected to because of the following informalities: On line 3, event is misspelled. Appropriate correction is required.

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 18-36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 26-28 and 36 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, electro-magnetic signals (see specification pg 14, lines 9-15). Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. Moreover, it does not appear that a claim reciting a

signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

Claims 18-25 and 29-35 appear to be directed to an abstract idea rather than a practical application of the idea. The claimed invention does not result in a physical transformation nor does the claimed invention appear to provide a useful, concrete, and tangible result. Specifically, the claimed invention does not appear to produce a tangible result because merely "generating interval data" and "causing output to be produce based on current time and interval data" are nothing more than thoughts or computations within a processor. It fails to use or make available for use the result of the method to enable its functionality and usefulness to be realized. Additionally, the asserted practical application in the specification of the method is displaying a computer graphics image on a display screen, which is not explicitly recited in the claims nor does it flow inherently therefrom.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1-9, 16, 18-27, 29, 30, 32, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson (NPL Document "Animation Support in a User Interface Toolkit: Flexible, Robust, and Reusable Abstractions").

As per claim 1, Hudson teaches the claimed "a first component" by teaching of the toolkit for creating high level events (1st full paragraph in 2nd col on page 6). Hudson teaches the claimed "receives clock data" by teaching of getting the current time (1st paragraph under section 5).

Hudson teaches the claimed "second component" by teaching of "'low-level' systems that provide more direct access to the machine are employed" (1st paragraph under section 4).

Hudson teaches the claimed "determines an output based on the interval data and current time data" by teaching of: "If an object is to move from point to point B in 3 seconds, the interface implementor can easily state this. In addition, the system will deliver a metered set of animation steps to the object which cause it to arrive at point B as close to 3 seconds after leaving point A as possible, with as smooth a transition as the actual OS and window system performance and timing allow" (2nd paragraph in 2nd col on page 3). In this instance, the current time data is used to determine 3 seconds and the interval data number of frames of animation that can be drawn in 3 seconds. Hudson further teaches the claimed limitation by teaching of "The goal of the system then, is to deliver animation steps with parameters that match the actually occurring intervals of time as closely as possible" (output determined based upon animation steps of intervals)(3rd full paragraph in 1st col on page 8).

Hudson teaches the claimed "such that timing of the output is relative to both the interval data and the current time data" by teaching of "The system currently measures the real-time response of the drawing portion of the redraw cycle. The current time is recorded just before the interactor tree is traversed to produce drawing updates" (1st paragraph under section 5). In this instance, the timing of the output is based upon the real time response of the drawing (output is

relative to interval data). Hudson teaches of the output being relative to the current time data by teaching of "the system will deliver a metered set of animation steps to the object which cause it to arrive at point B as close to 3 seconds after leaving point A as possible, with as smooth a transition as the actual OS and window system performance and timing allow" (2nd paragraph in 2nd col on page 3)". In this instance, the fact that the object arrives at point B as close to 3 seconds as possible means that the output (the animation of the object) is relative to the current time data (3 seconds).

Hudson does not explicitly teach the claimed "interval generation mechanism", however, Hudson suggests the claimed limitation by teaching of "an interval can be expressed as two specific (wall clock) times" (middle of 1st col on page 6) and by teaching of "Both start and end values are passed because each step corresponds not a single in time, but instead to a finite interval of time" (last paragraph in 2nd col on page 6). It would have been obvious to one of ordinary skill in the art at the time of invention of modify Hudson to achieve the claimed limitation. Hudson teaches one possible advantage to modification by teaching of "In addition, the system will deliver a metered set of animation steps to the object which cause it to arrive at point B as close to 3 seconds after leaving point A as possible, with as smooth a transition as the actual OS and window system performance and timing allow" (2nd paragraph in 2nd col on page 3).

As per claim 2, Hudson teaches the claimed limitation by teaching of in figure 6, which shows the progress of an animation.

As per claim 3, Hudson does not explicitly teach the claimed limitation, but does suggest it by teaching of "as well as complete support for keyframe (pose-to-pose) interpolation for future work" (bottom paragraph in 1st col on page 3). It would have been obvious to one of ordinary skill in the art to modify Hudson to perform the claimed limitation in order to better handle interpolation between keyframes (bottom paragraph in 1st col on page 3).

As per claim 4, Hudson teaches the claimed limitation by teaching of "'low-level' systems that provide more direct access to the machine are employed" (second component)(1st paragraph under section 4) which is faster than the toolkit program (first component) which provides high level events (1st full paragraph in 2nd col on page 6) for scheduling animation to the system from time to time according to user input. Thus, the second component which does the actual drawing and system updating operates at a faster operation rate.

As per claim 5, Hudson teaches the claimed limitation by teaching of "As transitions are scheduled, those have determined starting and ending times are placed in a scheduling queue (sorted by start time)" (bottom paragraph in 1st col on page 8) where the transitions have events associated with them. Further, Hudson shows an event list in figure 5.

As per claim 6, Hudson teaches the claimed limitation by teaching of scheduling events based upon the user interface (see top of 2nd col on page 5) and by teaching of "animation in an interface" (middle paragraph in 2nd col on page 1).

As per claim 7, Hudson teaches the claimed limitation by teaching of "(these transitions in turn schedule themselves and may possibly be place in the selected set and started)" (middle paragraph in 2nd col on page 8). In this instance, these events are implicit because they schedule themselves rather than the user directly scheduling them.

As per claim 8, Hudson teaches the claimed limitation by teaching of idle events where nothing happens (unused events) (bottom paragraph in 2nd col on page 7).

As per claim 9, Hudson teaches the claimed limitation by teaching of "The final four parameters to the transition establish its time interval. This transition is set to operate over a time interval beginning in 500 milliseconds and lasting for 4 seconds" (middle of 1st col on page 7). In this instance, the output is determined based upon the current time (beginning in 500 milliseconds) and the duration (lasting 4 seconds).

As per claim 16, Hudson teaches the claimed limitation by teaching of "The current time is recorded just before the interactor tree is traversed to produce drawing updates" (top paragraph in 2nd col on page 9) where the current time is function data because it is used by the recording function to record the current time.

As per claim 18, this claim is similar in scope to claim 1, and thus is rejected under the same rationale.

As per claim 19, Hudson teaches the claimed limitation by teaching of determining an interval based on the start and end times, and determining a progress value through modifying the animation within the interval (bottom paragraph in 2nd col on page 6). Hudson further teaches the claimed limitation in figure 6 which shows animation progress within an interval and by teaching of "parameter values that uniformly track the passage of time" (bottom paragraph in 2nd col on page 5).

As per claim 20, Hudson teaches the claimed limitation in figure 6 where the animation property values (i.e. object position) varies based on the progress value.

As per claim 21, Hudson teaches the claimed limitation by teaching of "As transitions are scheduled, those have determined starting and ending times are placed in a scheduling queue" (bottom paragraph in 1st col on page 8) and by showing an event list in figure 5. Hudson further

teaches the claimed limitations by teaching of "Each transition acts on animation or end steps as illustrated in Figure 6 ... These two values define the interval in local parameter space" (bottom paragraph in 2nd col on page 8).

As per claim 22, Hudson teaches the claimed limitation by teaching of scheduling events based upon the user interface (see top of 2nd col on page 5) where the scheduling will add the events to the schedule queue in figure 6 (event list). Hudson further teaches the claimed limitations by teaching of "animation in an interface" (middle paragraph in 2nd col on page 1).

As per claim 23, Hudson teaches the claimed limitation by teaching of "(these transitions in turn schedule themselves and may possibly be place in the selected set and started)" (middle paragraph in 2nd col on page 8). In this instance, these events are implicit because they schedule themselves rather than the user directly scheduling them. Further, these implicit events can be triggered in response to interactive events (also see top of 2nd col on page 5).

As per claim 24, Hudson teaches the claimed limitation by teaching of adding an ideal event (an unused event) after a real-time drawing operation (top paragraph in 2nd col on page 9) where this drawing operation can be in response to an interactive event (also see top of 2nd col on page 5).

As per claim 25, Hudson does not explicitly teach the claimed limitation, but does suggest it by teaching of "In this framework we can think of animation steps as covering adjacent

intervals of time roughly corresponding to redraw cycles" (middle paragraph in 1st col on page 8). It would have been obvious to one of ordinary skill in the art to modify Hudson to perform the claimed limitation in order to base the redraw cycles on the refresh rate in order to produce a clear and smooth animation.

As per claim 26, Hudson teaches the claimed limitation by teaching of basing the system off of program code (see top paragraph in 1st col on page 7 and code in 1st col on page 7). It is inherent for a computer-readable medium to be used in order for the system to function correctly as described by Hudson.

As per claim 27, Hudson teaches the claimed "begin time" and the claimed "end time" by teaching of start and end values for a given interval (bottom paragraph in 2nd col on page 6). Hudson teaches the claimed "initial progress value" and the claimed "final progress value" in figure 6 where the curve shown on top has an initial starting point and a final starting point. These points correspond the progress made during the animation process. Hudson further teaches these claimed aspects by teaching of animation steps to move an object from start point A to ending point B (first full paragraph in 2nd col on page 3).

Hudson does not explicitly teach the claimed "data structure" comprising fields. However, Hudson suggests the claimed limitation by teaching of recording time data (1st paragraph under section 5) and by teaching of using a computer to run the program described in Hudson (1st paragraph under section 4). It would have been obvious to one of ordinary skill in the art to use the claimed features in order to better-organized data stored in memory.

Hudson does not explicitly teach the claimed "interpolate a progress value", but does suggest it by teaching of "as well as complete support for keyframe (pose-to-pose) interpolation for future work" (bottom paragraph in 1st col on page 3). It would have been obvious to one of ordinary skill in the art to modify Hudson. The motivation of claim 3 is incorporated herein.

As per claim 29, the reasons and rationale for the rejection of claim 1 is incorporated herein in regards to the claimed "determining a current interval" and the claimed "produce an output based on the time value, such that timing of the output is relative to both the current interval and the time value" because claim 1 claims very similar features.

Hudson teaches the claimed "generating an event list" by teaching of "As transitions are scheduled, those have determined starting and ending times are placed in a scheduling queue" (bottom paragraph in 1st col on page 8) and by showing an event list in figure 5 where the scheduling queue has events associated with them.

Hudson does not explicitly teach the claimed "computing an interval list", however, suggests the claimed limitation by teaching of "Each transition acts on animation or end steps as illustrated in Figure 6 ... These two values define the interval in local parameter space" (bottom paragraph in 2nd col on page 8) where each interval in the list will be associated with an event in the schedule list shown in figure 6. It would have been obvious to modify Hudson to perform the claimed limitation. The motivation of claim 1 is incorporated herein.

As per claim 30, Hudson teaches the claimed limitation by teaching of generating intervals based upon absolute times (bottom paragraph in 1st col on page 6) where the absolute

times are based upon the clock. Hudson teaches of receiving the current time from the clock (a clock property)(top paragraph in 2nd col on page 9).

As per claim 32, Hudson teaches the claimed limitation by teaching of "schedules the transition only once its full interval is resolved" (a transition of events)(top paragraph in 2nd col on page 6) and by teaching of "(these transitions in turn schedule themselves and may possibly be place in the selected set and started)" (middle paragraph in 2nd col on page 8). In this instance, these inserted events are implicit because they schedule themselves rather than the user directly scheduling them.

As per claim 35, Hudson teaches the claimed limitation by teaching of idle events (unused events) where these events do not change the state of operation (bottom paragraph in 2nd col on page 7).

As per claim 36, this claim is similar in scope to claim 26, and thus is rejected under the same rationale.

1. Claims 10-15, 17, 28, 31, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson in view of Milne (US Patent 5553222, herein referred to as "Milne").

As per claim 10, Hudson does not explicitly teach the claimed limitation. Milne teaches the claimed limitation in figure 5 where clock A is shown to have a repeat count of 2 where the

repeat count indicates that clock B ticks at least twice as often as clock A. For example, clock A waits for clock B to be repeated twice before adding a unit of time to its count. It would have been obvious to one of ordinary skill in the art to combine Hudson and Milne. One advantage to the combination is that Milne teaches of improved clock control for synchronization (col 1, lines 58-65).

As per claim 11, Hudson does not explicitly teach the claimed limitation. Milne teaches the claimed limitations by stating "Clocks can travel backwards in time" (col 7, lines 28). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

As per claims 12 and 13, Hudson does not explicitly teach the claimed limitation. Milne teaches the claimed limitations by teaching of basing a moving playback position (which is the equivalent of a play head on a tape recorder) according to a clock rate (col 9, lines 12-16). Milne teaches of slowing down and speeding up a clock such as a master clock (col 9, lines 30-33) where this slowing down and speeding up would have to have an associated de-acceleration or acceleration. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

As per claim 14, Hudson does not explicitly teach the claimed limitation. Milne teaches the claimed limitation by teaching of "A non-driven time source knows how to find its current time, and it has a member function, GetNextTime(), that returns the next time that an alarm or

delay should be fired" (col 12, lines 57-60) where this process of finding the next time an alarm or delay should be fired is a seek instruction because it is seeking out the next time an associated event should fire. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

As per claim 15, Hudson does not explicitly teach the claimed limitation. Milne teaches the claimed limitation by teaching of a clock rate (speed data) by stating "a is a floating point value that determines the rate of the slave clock's current time relative to the master clock's current time)" (col 8, lines 25-27). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

As per claim 17, Hudson does not explicitly teach the claimed limitation. Milne teaches the claimed limitation by teaching of associating different clocks (and thus their associated players which are components) with a unique thread by teaching of blocking/unblocking threads. Milne states "A clock can block a thread until a certain time, called the delay time, is reached. If the clock is going forward, the thread is unblocked when the clock's current time is equal to or greater than the delay time" (col 7, lines 35-39). It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

As per claim 28, this claim is similar in scope to claim 10, and thus is rejected under the same rationale. This is because the claimed repeat count of claim 10 functions similar to the claimed iteration of this claim.

As per claim 31, Hudson does not explicitly teach the claimed limitation. Milne teaches of a dependent clock receiving properties from another clock (i.e. an independent clock) in figure 15. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

As per claim 34, the reasons and rationale for the rejection of claim 32 is incorporated herein in regards to the claimed "inserting an implicit event" because claim 32 claims a similar feature.

Hudson does not explicitly the claimed "iteration". Milne teaches the claimed limitation in figure 5 where clock A is shown to have a repeat count (an iteration) of 2 where the repeat count indicates that clock B ticks at least twice as often as clock A. It would have been obvious to one of ordinary skill in the art to use the claimed feature with Hudson. The motivation of claim 10 is incorporated herein.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection. Applicant argues that Milne "cannot distinguish between timing and interval data" (top of page 11 of remarks). However, in this office action, the

reference of Hudson is now relied upon for teaching interval data while the reference of Milne is relied primarily for teaching of clock data and clock properties. Further, applicant argues that "Milne cannot determine anything about the occurrence of events not under the control of its system" (top of page 13 of remarks). However, again in this office action, the reference of Hudson is now relied upon for teaching events and event data while the reference of Milne is relied primarily for teaching of clock data and clock properties.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel F. Hajnik whose telephone number is (571) 272-7642. The examiner can normally be reached on Mon-Fri (8:30A-5:00P).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka J. Chauhan can be reached on (571) 272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel F. Hajnik 11/20/06

DFH

ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER